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Kyocera Wireless Corp.
Attn: Patent Department
PO Box 928289
an Diego, CA 92192-8289

EXAMINER	
CONTEE, JOY KIMBERLY	
ART UNIT	PAPER NUMBER
2617	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/051,517	FORRESTER, TIM	
	Examiner	Art Unit	
	Joy K. Contee	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,11-15,17-26,29-38,40-44,46,49-57,59 and 61-66* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,11-15,17-26,29-38,40-44,46,49-57,59,61-66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/26/07 has been entered.

Response to Arguments

2. Applicant's arguments filed 3/26/07 have been fully considered but they are not persuasive. Applicant has amended that claims in an attempt to clarify that GPS satellite information is received at the base station from a GPS satellite and that the base station transmits the position of the GPS enabled device to the GPS enabled device. Examiner contends that both primary references used the rejections under 35 USC 103(a) , Kingdon et al. (US Pat No. 6,411,811) and Dooley (US Pat. No. 6,525,689) read on even the amended claims. However, it unclear from Applicant specification where the GPS enabled device transmits decoded position information requiring at least some processing to determine position of the GPS enabled device. Applicant specification describes a device 200 receiving decoded signals from GPS satellites and then sending the decoded signals to a position determine entity (see page [020-021]). Hence, Examiner has maintained the previous rejections due to this unclarity.

Specification

3. The amendment filed 3/26/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: receiving, from the GPS enabled device, decoded position information requiring at least some processing to determine a position of the GPS enabled device.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-5, 11-13,15,17,33,34,40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingdon et al. (Kingdon), U.S. Patent No. 6,411,811, previously used, in view of Boesch et al. (Boesch), U.S. Pub. No. 2002/0111171.

Regarding claims 1 and 2, Kingdon discloses a method for providing position assist information from a base station (reads on method for provisioning assistance GPS information to a mobile station from a Mobile Location Center MLC serving the Public Land Mobile Network 290, see Fig. 2), comprising:

receiving GPS satellite information (i.e., reads on reference GPS receiver 260 receiving navigation messages from GPS satellites 280 and Mobile Location Center

(MLC) 240 obtaining assistance GPS data from reference GPS receiver 260)(col. 4,line 66 to col. 5,line 14 and see Fig. 2); and

transmitting the received GPS satellite information to a GPS enabled device (i.e., reads on MLC 240 obtaining assistance GPS data from GPS receiver 260 and forwards assistance GPS data to mobile station 200 with a built-in or attached GPC receiver 205)(col. 5,lines 10-16 and see Fig. 2);

receiving decoded position information from the GPS enabled device (reads on mobile station sending location information (e.g., latitude and longitude) to MLC and further, MLC forwards location information to Location Application LA) (col. 5,lines 17-24); and

determining a position of the GPS enabled device based on the received decoded position information (reads on latitude and longitude calculated by mobile station transmitted back to MLC, see col. 5,lines 17-21), and

transmitting the determined position to the GPS enabled device (reads on MLC forwarding the location of the mobile station to the requesting Location Application LA, which can be within the mobile station itself, see col. 3,lines 57-64) (col. 5,lines 21-23).

Kingdon fails to explicitly disclose transmitting the received GPS satellite information at a time that is not associated with a position request.

In a similar field of endeavor, Boesch disclose transmitting the received GPS satellite information to a GPS enabled device at a time that is not associated with a position request (see page 4 [0035-0043]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Kingdon to include wherein position assist information is transmitted periodically at times not associated with a position request for the purpose of maintaining current position assistance data (see Boesch, page 3 [0027]).

Regarding claim 3, Kingdon discloses the method of claim 1, further comprising periodically (i.e., reads on updating every thirty minutes) locating GPS satellites (i.e., reads on MLC obtaining relevant assistance GPS data such as identity of the visible satellites 280), wherein the GPS satellites information is periodically received from the located GPS satellites (i.e., via the reference GPS receiver 260 which has a line of sight view with satellites 280) (col. 4,lines 41-53).

Regarding claim 4, Kingdon discloses the method of claim 3, further comprising inherent processing of the received GPS satellite information (i.e., the reference GPS receiver 206 computes a position solution based on received satellite 208 information) (col. 2,lines 30-43) and transmitting the processed information to the GPS enabled device (i.e., reads on MLC 240 obtaining assistance GPS data from GPS receiver 260 and forwards assistance GPS data to mobile station 200 with a built-in or attached GPC receiver 205)(col. 5,lines 10-16 and see Fig. 2).

Regarding claim 5, Kingdon discloses the method of claim 1, further comprising periodically receiving the GPS satellites information from a position determination entity (reads on MLC) (i.e., Mobile Location Center (MLC) forwarding differential corrections received from the reference GPS receiver to the mobile station's serving base station

transceiver BTS to be broadcast to mobile station within the cell every five seconds) (col. 4, lines 64-59).

Regarding claim 11, Kingdon discloses the method of claim 9, further comprising:

sending the decoded position information to a position determination entity (reads on mobile station sending location information (e.g., latitude and longitude) to MLC) (col. 5,lines 17-24);

receiving a position of the GPS enabled device determined from the decoded position information from the position determination entity (reads on latitude and longitude calculated by mobile station transmitted back to MLC, see col. 5,lines 17-21); and

transmitting the position to the GPS enabled device (reads on MLC forwarding the location of the mobile station to the requesting Location Application LA, which can be within the mobile station itself, see col. 3,lines 57-64) (col. 5,lines 21-23).

Regarding claim 12, Kingdon discloses a method for receiving position assist information from a base station, comprising:

receiving GPS satellite information from the base station (i.e., reads on mobile station receiving GPS assistance data from base station transceiver via the Mobile Location Center MLC) (col. 5,lines 10-16) ;

storing the received GPS satellite information (i.e., reads on storing current GPS assistance data in a database found in the MLC) (col. 5,lines 2-6);

receiving a position request (col. 5,lines 6-10); and

automatically acquiring (reads on only accessing stored information associated with correct reference GPS receiver when the correct reference GPS is ascertained) GPS satellites using the stored information in response to the received position request (col. 5,lines 6-10).

Kingdon fails to explicitly disclose transmitting the received GPS satellite information at a time that is not associated with a position request.

In a similar field of endeavor, Boesch disclose transmitting the received GPS satellite information to a GPS enabled device at a time that is not associated with a position request (see page 4 [0035-0043]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Kingdon to include wherein position assist information is transmitted periodically at times not associated with a position request for the purpose of maintaining current position assistance data (see Boesch, page 3 [0027]).

Regarding claim 13, Kingdon discloses the method of claim 12, wherein the GPS satellite information is received periodically (col. 4,lines 44-53).

Regarding claim 15, Kingdon discloses the method of claim 12, further comprising receiving position information from the acquired GPS satellites, and determining a position based on the received position information (col. 5,lines 17-23).

Regarding claim 16, Kingdon discloses the method of claim 12, further comprising:

receiving position information from the acquired GPS satellites (i.e., reads on MLC obtaining relevant assistance GPS data from the reference GPS receiver 260,

such as the identity of the visible satellites 280 and forwarding the the mobile station) (col. 4,lines 44-53 and col. 5,lines 10-14 and see Fig. 2);

inherently decoding (i.e., recognizing and interpreting) the received position information (reads on mobile station using assistance GPS data to calculate its position, e.g., latitude and longitude, hence interpreting and recognizing received assistance GPS data) (col. 5,lines 17-21);

transmitting the decoded position information to the base station (reads on mobile station sending location information (e.g., latitude and longitude) to MLC via BTS, hence position information is decoded and sent to BTS (col. 5,lines 17-21); and

receiving a position determined from the decoded position information from the base station (reads on MLC forwarding the location of the mobile station to the requesting Location Application LA via the BTS, hence LA receives position information from BTS) (col. 5,lines 21-23).

Regarding claim 17, Kingdon discloses the method of claim 12, further comprising adjusting a correlation time based on the stored information in order to improve the chances of acquiring the GPS satellites (i.e., reads on providing necessary assistance GPS data allows for quick calculation of position, hence improving the location accuracy of the MS) (col.5, lines 24-33).

Regarding claim 33, Kingdon discloses a base station, comprising:

a network interface (reads on MSC/VLR 230 and BSC 220) configured to interface the base station (reads BTS 210) with a position determination entity (reads on Mobile Location Center MLC 240), the base station configured to receive GPS satellite

information (reads on differential corrections) from the position determination entity (col. 4,lines 44-59); and

a transmitter configured to transmit the received GPS satellite information to a GPS enabled device (reads on serving BTS 210 broadcasting differential corrections on BCCH to mobile stations within the cell) (col. 4,lines 54-59 and lines 63-65);

receiving decoded position information from the GPS enabled device (reads on mobile station sending location information (e.g., latitude and longitude) to MLC and further, MLC forwards location information to Location Application LA) (col. 5,lines 17-24); and

determining a position of the GPS enabled device based on the received decoded position information (reads on latitude and longitude calculated by mobile station transmitted back to MLC, see col. 5,lines 17-21), and

transmitting the determined position to the GPS enabled device (reads on MLC forwarding the location of the mobile station to the requesting Location Application LA, which can be within the mobile station itself, see col. 3,lines 57-64) (col. 5,lines 21-23).

Kingdon fails to explicitly disclose transmitting the received GPS satellite information at a time that is not associated with a position request.

In a similar field of endeavor, Boesch disclose transmitting the received GPS satellite information to a GPS enabled device at a time that is not associated with a position request (see page 4 [0035-0043]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Kingdon to include wherein position assist information is transmitted

periodically at times not associated with a position request for the purpose of maintaining current position assistance data (see Boesch, page 3 [0027]).

Regarding claim 34, Kingdon discloses in the alternative (i.e., meets one of the "or" options) the base station of claim 33, further configured to receive the GPS satellite information periodically (reads on MLC is updated with assistance GPS data every thirty minutes, thus forwards assistance data to MS via BTS periodically) (col. 4,lines 49-53).

Regarding claim 39, Kingdon discloses the base station of claim 33, further comprising a receiver, the receiver inherently configured to receive decoded position information from the GPS enabled device (i.e., reads on mobile station sending location information back to MLC via BTS, hence the base station is able to receive the decoded position information from the mobile station) (col. 5,lines 17-21).

Regarding claim 40, Kingdon discloses the base station of claim 39, further configured to:

send the decoded position information to the position determination entity through the network interface (i.e., reads on BTS 210 via BSC 220 and MSC/VLR230 sending position information to MLC 240 from mobile station 200, e.g., provisioning though the cellular network) (col. 5,lines 17-33 and see Fig.1);

receive a position of the GPS enabled device determined from the decoded position information from the position determination entity through the network interface(reads on MLC forwarding location information via the BSC and MSC/VLR to the BTS for transmission to the mobile station)(col. 5, lines 10-16);

transmit the position to the GPS enabled device (reads on MLC forwarding the location of the mobile station to the requesting Location Application LA, which may be included in the mobile station itself (col. 3,lines 62-64 and col. 5,lines 21-23).

Regarding claim 41, Kingdon discloses the base station of claim 33, wherein the transmitter is inherently configured to transmit the received GPS satellite information to the GPS enabled device over a control channel (reads on BTS broadcasting differential correction information on BCCH channel to mobile stations) (col. 4,lines 54-59).

6. Claims 20-22 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dooley et al. (Dooley), U.S. Patent No. 6,525,689, previously used, in view of Boesch et al. (Boesch), U.S. Pub. No. 2002/0111171.

Regarding claim 20, Dooley discloses a base station, comprising:

a GPS receiver (35) configured to locate, and receive information from, GPS satellites (col. 2,lines 32-35 and col. 4,lines 27-38 and see Fig. 3); and

a transmitter configured to transmit the received GPS satellite information to a GPS enabled device (col. 2,lines 38-40);

receiving decoded position information from the GPS enabled device (reads on mobile station sending location information (e.g., latitude and longitude) to MLC and further, MLC forwards location information to Location Application LA) (col. 5,lines 17-24); and

determining a position of the GPS enabled device based on the received decoded position information (reads on latitude and longitude calculated by mobile station transmitted back to MLC, see col. 5,lines 17-21), and

transmitting the determined position to the GPS enabled device (reads on MLC forwarding the location of the mobile station to the requesting Location Application LA, which can be within the mobile station itself, see col. 3,lines 57-64) (col. 5,lines 21-23).

Dooley fails to explicitly disclose transmitting the received GPS satellite information at a time that is not associated with a position request.

In a similar field of endeavor, Boesch disclose transmitting the received GPS satellite information to a GPS enabled device at a time that is not associated with a position request (see page 4 [0035-0043]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Dooley to include wherein position assist information is transmitted periodically at times not associated with a position request for the purpose of maintaining current position assistance data (see Boesch, page 3 [0027]).

Regarding claim 21, Dooley discloses the base station of claim 20, wherein the GPS receiver is configured to locate the GPS satellites periodically (i.e., reads on substantially continual constant possession of up to date GPS satellite information) (col. 4,lines 29-35).

Regarding claim 22, Dooley discloses the base station of claim 20, further comprising a processor configured to process (i.e., reads on modify) the received GPS satellite information, wherein the transmitter is configured to transmit the processed information to the GPS enabled devices (col. 2,lines 35-40).

Regarding claim 27, Dooley discloses the base station of claim 20, further comprising a receiver, the receiver configured to receive decoded position information

(reads on position information) from the GPS enabled device (reads on telephone) (col. 4,lines 50-53).

Regarding claim 29, Dooley discloses the base station of claim 27, further comprising a position determination entity (reads on GPS antenna, GPS receiver and microprocessor, see Fig. 3), wherein the position determination entity is configured to determine the position from the decoded position information (reads on position information) (col. 4,lines 26-53).

7. Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingdon and Boesch, in further view of Riley et al. (Riley), U.S. Patent Publication No. 2003/0125046.

Regarding claim 6, Kingdon and Boesch discloses the method of claim 1, but fails to explicitly disclose comprising transmitting the information to the GPS enabled device each time the GPS enabled device registers with the base station.

In a similar field of endeavor, Riley discloses transmitting the information to the GPS enabled device each time the GPS enabled device registers with the base station (reads on when a mobile station participates in a position location session, which is, as it travels from sector A to D, mobile begins to make a location fix or register, see Fig. 4) (p. 3-4 [0029] & [0036]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include transmitting of the GPS information each time the mobile registers for the purpose of assisting in location updating which is usually a part of registration when a mobile moves from cell to cell or sector to sector.

Regarding claim 14, Kingdon and Boesch discloses the method of claim 12, but fails to further disclose comprising registering with the base station, and receiving the GPS satellite information during the registration.

In a similar field of endeavor, Riley discloses registering with the base station, and receiving the GPS satellite information during the registration (reads on when a mobile station participates in a position location session, which is, as it travels from sector A to D, mobile begins to make a location fix or register, see Fig. 4) (p. 3-4 [0029] & [0036]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include transmitting of the GPS information each time the mobile registers for the purpose of assisting in location updating which is usually a part of registration when a mobile moves from cell to cell or sector to sector.

8. Claims 7, 8,18,19,37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingdon and Boesch, in further view of King, U.S. Patent No. 6,300,899.

Regarding claims 7,18 and 37, Kingdon and Boesch discloses the method of claims 1,12 and 33,respectively, but fails to explicitly disclose wherein the transmitted information includes access assist information.

In a similar field of endeavor, King discloses that a GPS central reference site transmits via a wireless link acquisition (reads on access) assist information (col. 11,lines 11-14).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include access assist information for the purpose of assisting in the tracking of a particular satellite due to insufficient signal strength (see King, col. 11,lines 4-14).

Regarding claims 8, 19 and 38, Kingdon and Boesch discloses the method of claims 1,12 and 33,respectively, but fails to explicitly disclose wherein the transmitted information includes sensitivity assist information.

In a similar field of endeavor, King discloses that a GPS central reference site transmits via a wireless link acquisition (reads on sensitivity, i.e., the degree to which the receiver responds to incoming waves from the satellite, Sensitivity. (1997). *In Meriam Webster's Collegiate Dictionary* (10th ed.). Philippines: Merriam-Webster, Incorporated.) assist information (col. 11,lines 11-14).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include sensitivity assist information for the purpose of assisting in the tracking of a particular satellite (see King, col. 11,lines 4-14).

9. Claims 23,30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dooley and Boesch, in further view of Kingdom.

Regarding claim 23, Dooley and Boesch discloses the base station of claim 20, but fails to explicitly disclose comprising a network interface configured to interface the base station with a position determination entity, wherein the base station is configured to receive GPS satellites information from the position determination entity through the network interface.

In a similar field of endeavor, Kingdom discloses the base station further comprising a network interface (reads on MSC/VLR and BSC) configured to interface the base station with a position determination entity (reads on MLC), wherein the base station is configured to receive GPS satellites information from the position determination entity through the network interface (col. 4,lines 54-59).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include a base station network interface for the purpose of allowing the base station to receive GPS information from a position determination entity over the existing wireless network (see Kingdon, col. 2,lines 60-64).

Regarding claim 28, Dooley and Boesch discloses the base station of claim 27, but fails to explicitly disclose the base station configured to determine a position of the GPS enabled device based on the received decoded position information, and to transmit the determined position to the GPS enabled device.

Kingdon further discloses disclose the base station configured to determine a position of the GPS enabled device based on the received decoded position information, and to transmit the determined position to the GPS enabled device (reads on MLC sending GPS assistance data via BTS, hence BTS receives decoded position information and MS sending back location information to MLC via BTS and finally MLC forwarding location of the MS to the requesting LA which can be found within MS, see col. 3,lines 62-64) (col. 5,lines 6-23).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include transmitting the determined position to the

GPS enable device, such as a mobile telephone in case the mobile telephone is not able to calculate on its own, its position.

Regarding claim 30, Dooley and Boesch discloses the base station of claim 27, but fails to further disclose the base station comprising a network interface configured to interface the base station with a position determination entity, the base station configured to: send the decoded position information to the position determination entity through the network interface; receive a position of the GPS enabled device determined from the decoded position information from the position determination entity through the network interface; and transmit the position to the GPS enabled device.

Kingdon further discloses the base station comprising a network interface (MSC/VLR and BSC) configured to interface the base station with a position determination entity (MLC), the base station configured to:

send the decoded position information to the position determination entity (i.e., MLC) through the network interface (MSC/VLR and BSC) (reads on MS using the assistance GPS data to calculate its position and sending this information back to the MLC, i.e., via the MSC/VLR 230,BSC 220 and BTS 210, hence the decoded position information is sent by the BTS 210 (base station)) (see Kingdon, col. 5,lines 17-23);

receive a position of the GPS enabled device determined from the decoded positon information from the position determination entity (MLC) through the network interface (i.e., MLC forwards the location of the MS to the requesting LA 240 via the network (BSC and MSC/VLR and base station (BTS)) (see Kingdon, col. 2, lines 60-64 and col. 5,lines 17-33); and

transmit the position to the GPS enabled device (i.e., MLC forwards the location of the MS to the requesting LA 240 via the network (BSC and MSC/VLR and base station (BTS)), which can be in the mobile itself, see col. 3,lines 63-64) (see Kingdon, col. 2, lines 60-64 and col. 5,lines 17-33 and see Fig. 1).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include a base station network interface for the purpose of allowing the base station to receive GPS information from a position determination entity over the existing wireless network (see Kingdon, col. 2,lines 60-64).

Regarding claim 31, Dooley and Boesch discloses the base station of claim 20, but fails to disclose wherein the transmitter is configured to transmit the received GPS satellite information to the GPS enabled device over a control channel.

Kingdon discloses the base station wherein the transmitter is configured to transmit the received GPS satellite information to the GPS enabled device over a control channel (col. 4,lines 54-59).

At the time of the invention it would have been obvious to one ordinary skill in the art to modify the combination to include transmitting GPS satellite information over a control channel for the purpose of allowing GPS information to broadcast periodically from base stations to the listening mobile stations.

10. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dooley and Boesch, in further view of Yamane, U.S. Patent Publication No. 2001/0044312 and Riley.

Regarding claim 24, Dooley and Boesch discloses the base station of claim 20, but fails to disclose comprising a receiver configured to receive a registration request from the GPS enabled device, wherein the base station is configured to transmit the GPS satellite information in response to the registration request.

In a similar field of endeavor, Yamane discloses a receiver, wherein the base station is configured to receive a registration request to the base station (reads on through base stations) using the transmitter (p. 3 [0062]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include mobile terminal able to generate a registration request to the base station for the purpose of allowing registration at the appropriate times, i.e., when the mobile terminal has moved from one region to the next.

Yamane fails to explicitly disclose wherein the GPS satellite information is received (i.e., from the base station) during the registration.

In a similar field of endeavor, Riley discloses wherein the GPS satellite information is received (i.e., from the base station) during the registration (p. 3 [0029]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to have modified the combination to include transmitting the GPS satellite information in response to registration requests for the purpose of assisting in location updating which is usually a part of registration when a mobile moves from cell to cell or sector to sector.

11. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dooley and Boesch, in view of King.

Regarding claim 25, Dooley and Boesch discloses the base station of claim 20, but fails to disclose wherein the transmitted information includes access assist information.

In a similar field of endeavor, King discloses that a GPS central reference site transmits via a wireless link acquisition (reads on access) assist information (col. 11,lines 11-14).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include access assist information for the purpose of assisting in the tracking of a particular satellite due to insufficient signal strength (see King, col. 11,lines 4-14).

Regarding claim 26, Dooley and Boesch discloses the method of claim 20, but fails to explicitly disclose wherein the transmitted information includes sensitivity assist information.

In a similar field of endeavor, King discloses that a GPS central reference site transmits via a wireless link acquisition (reads on sensitivity, i.e., the degree to which the receiver responds to incoming waves from the satellite, Sensitivity. (1997). *In Meriam Webster's Collegiate Dictionary* (10th ed.). Philippines: Merriam-Webster, Incorporated.) assist information (col. 11,lines 11-14).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include sensitivity assist information for the purpose of assisting in the tracking of a particular satellite (see King, col. 11,lines 4-14).

12. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Dooley, Boesch and Kingdon, in further view of Ramesh, U.S. Patent No. 6,636,740.

Regarding claim 32, Dooley, Boesch and Kingdon disclose the base station of claim 31, but fail to explicitly disclose wherein the control channel is a PCS common control channel.

In a similar field of endeavor, Ramesh discloses wherein the control channel is a PCS common control channel (col. 6,lines 17-46).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include a base station operating in a PCS radio communication network thus capable of allowing a mobile unit to listen the broadcasted position information on a PCS common control channel.

13. Claims 35,43,46-49,51-54 and 59-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingdon and Boesch, in view of Dooley et al., U.S. Patent No. 6,525,689.

Regarding claim 35, Kingdon and Boesch discloses the base station of claim 33, but fails to disclose further comprising a processor configured to process the received GPS satellite information, wherein the transmitter is configured to transmit the processed information to the GPS enabled device.

In a similar field of endeavor, Dooley discloses a processor configured to process (i.e., modify) the received GPS satellite information, wherein the transmitter is

configured to transmit the processed information to the GPS enabled device (col. 4,lines 26-38 and lines 45-50).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include a microprocessor for modifying the GPS information such that help is given to the mobile telephone to despread the incoming GPS signals (see Dooley, col. 4,lines 45-58).

Regarding claim 43, Kingdon and Boesch discloses a system including a GPS enabled device, comprising:

a receiver configured to receive GPS satellite information from a base station (reads on mobile receives GPS satellite information via MSC/VLR 230,BSC 220 and BTS 210) (col. 5,lines 10-16);

a memory configured to store the received GPS satellite information (reads on database 248 within MLC 240, which is directly coupled to the LA 250, which can be placed within the MS 200 itself, see col. 3,lines 56-64) (col. 5,lines 2-6); and

a GPS receiver configured to automatically acquire GPS satellites using the stored GPS satellite information in response to a position request (col. 4,lines 41-43 and col. 5,lines 6-16).

Kingdon discloses the claimed invention except for a GPS enable device comprising said memory.

In a similar field of endeavor, Dooley discloses a mobile cellular telephone MS1 which includes a GPS microprocessor 25, which stores GPS satellite information such

that the signals maybe acquired and traced for the purpose of determining a position of the MS1 (col. 3,line 66 to col. 4,line 17 and col. 6,lines 6-11).

At the time of the invention it would have been obvious to one of ordinary skill in the art to include said memory within Kingdon's mobile station as an alternative to the network for the purpose of allowing direct access to the received GPS information as taught by Dooley (see Dooley, col. 6, lines 6-11).

Regarding claim 45, Kingdon and Boesch as modified by Dooley further discloses GPS enable device of claim 43, wherein the GPS receiver is further configured to receive position information (reads on assistance GPS data) from the acquired GPS satellites (i.e., via the reference GPS receivers 260 and 270) and to determine a position based on the received position information (see Kingdon, col. 4,lines 29-43).

Regarding claim 46, Kingdon as modified by Dooley discloses the system including an enabled device of claim 43, further configured to adjust a correlation time (i.e., reads on providing necessary assistance GPS data to the MS which allows for quick calculation of position, hence improving the location accuracy of the MS) based on the stored information in order to improve the chances of acquiring the GPS satellites (see Kingdon, col. 5,lines 24-33).

Regarding claim 47 Kingdon and Boesch as modified by Dooley discloses the system including an enabled device of claim 43, further comprising a transmitter, wherein the GPS receiver is further configured to receive position information from the acquired GPS satellites and to decode the received satellite information, and wherein

the GPS enabled device is further configured to transmit the decoded position information to the base station device (reads on MS using the assistance GPS data to calculte its position and to send this information back to the MLC, i.e., via the MSC/VLR 230,BSC 220 and BTS 210, hence the decoded position information is sent to the BTS 210) (see Kingdon, col. 5,lines 17-23).

Regarding claim 48, Kingdon as modified by Dooley discloses the system including an enabled device of claim 43, further configured to receive a position (reads on location information, i.e., latitude and longitude, sent back to MLC 240 in a SMS message) determined from the decoded position information from the base station (reads on MLC forwarding the location of the MS to the requesting LA which may be at the MS itself, see Kingdon, col. 3,lines 62-64) (see Kingdon, col. 5, lines10-23).

Regarding claim 49, Kingdon as modified by Dooley discloses the system including an enabled device of claim 43, further configured to receive the GPS satellite information (reads on differential corrections) from the base station over a control channel (col. 4,lines 54-60).

Regarding claim 51, Kingdon discloses a wireless communication system, comprising:

a base station, comprising a transmitter configured to transmit GPS satellite information (reads on GPS assistance data sent over the network which includes MSC/VLR , BSC and BTS from the MLC) (col. 2,lines 60-64 and col.4 ,lines 54-59); and

a GPS enabled device, comprising:

a receiver configured to receive the GPS satellite information from the base station (col. 10,lines 24-35).

Kingdon fails to explicitly disclose within same said GPS enabled device: a memory device configured to store the received GPS satellite information; and a GPS receiver configured to automatically acquire GPS satellites using the stored GPS satellite information in response to a position request.

Dooley discloses a mobile cellular telephone MS1 which includes a GPS microprocessor 25, which stores GPS satellite information such that the signals maybe acquired and traced for the purpose of determining a position of the MS1 (col. 3,line 66 to col. 4,line 17 and col. 6,lines 6-11).

At the time of the invention it would have been obvious to one of ordinary skill in the art to include said memory within Kingdon's mobile station as an alternative to the network for the purpose of allowing direct access to the received GPS information as taught by Dooley (see Dooley, col. 6, lines 6-11).\

Kingdon also fails to explicitly disclose transmitting the received GPS satellite information at a time that is not associated with a position request.

In a similar field of endeavor, Boesch disclose transmitting the received GPS satellite information to a GPS enabled device at a time that is not associated with a position request (see page 4 [0035-0043]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Kingdon to include wherein position assist information is transmitted

periodically at times not associated with a position request for the purpose of maintaining current position assistance data (see Boesch, page 3 [0027]).

Regarding claim 52, Kingdon as modified by Dooley and Boesch discloses the wireless communication system of claim 51, but fails to explicitly wherein the base station further comprises a GPS receiver configured to acquire, and receive the GPS satellite information from, GPS satellites.

Dooley discloses wherein the base station further comprises a GPS receiver configured to acquire, and receive the GPS satellite information from, GPS satellites (col. 4,lines 26-38 and col. 6,lines 6-11).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Kingdon to include said GPS receiver in the base station for the purpose of integrating full GPS functions within the base station as taught by Dooley (see Dooley, col. 6,lines 6-11).

Regarding claim 53, Kingdon as modified by Dooley and Boesch discloses the wireless communication system of claim 51, further comprising a position determination entity (reads on MLC), wherein the base station further comprises a network interface (reads on BSC 220 and MSC/VLR 230) configured to interface the base station with the position determination entity, and wherein the base station configured to receive the GPS satellite information from the position determination entity through the network interface (see Kingdon, col. 5,lines 17-33 and see Fig. 1).

Regarding claim 54, Kingdon as modified by Dooley discloses the wireless communication system of claim 51, Kingdon fails to explicitly disclose wherein the base

station further comprises a processor configured to process the GPS satellite information, and wherein the base station is configured to transmit the processed information.

Dooley discloses wherein the base station further comprises a processor configured to process (i.e., reads on modify) the GPS satellite information, and wherein the base station is configured to transmit the processed information (col. 2,lines 35-40).

At the time of the invention it would have been obvious to one of ordinary skill in the art to further modify Kingdon to include a base station comprising a processor for processing GPS satellite information since Kingdon's base station already receives GPS assist information via the network.

Regarding claim 58, Kingdon as modified by Dooley and Boesch discloses the wireless communication system of claim 51, wherein the GPS receiver is further configured to receive position information from the acquired GPS satellites (i.e., via the reference GPS receivers 260 and 270) and to determine a position based on the received position information (see Kingdon, col. 4,lines 29-43).

Regarding claim 59, Kingdon as modified by Dooley and Boesch discloses the wireless communication system of claim 51, wherein the GPS enabled device is further configured to adjust a correlation time (i.e., reads on time it takes to calculate and access the GPS data) based on the stored information in order to improve the chances of acquiring the GPS satellites (see Kingdon, col. 5,lines 24-37).

Regarding claim 60, Kingdon as modified by Dooley and Boesch discloses the wireless communication system of claim 51, wherein the GPS enabled device further

comprises a transmitter, wherein the GPS receiver is further configured to receive position information from the acquired GPS satellites and to decode the received position information, and wherein the GPS enabled device is further configured to transmit the decoded position information to the base station (reads on MS using the assistance GPS data to calculate its position and sending this information back to the MLC, i.e., via the MSC/VLR 230,BSC 220 and BTS 210, hence the decoded position information is sent to the BTS 210) (see Kingdon, col. 5,lines 17-23).

Regarding claim 61, Kingdon as modified by Dooley and Boesch discloses the wireless communication system of claim 60, wherein the base station further comprises sition determination entity, and wherein the position determination entity is configured to determine the position from the decoded position information (see Dooley, col.4,lines 26-42 and col. 6,lines 6-11 and lines 40-49).

At the time of the invention it would have been obvious to one of ordinary skill in the art to further modify Kingdon to include a base station having a full GPS system or position determination entity for the purpose of allowing for a more timely acquisition of GPS signals.

Regarding claim 62, Kingdon as modified by Dooley and Boesch discloses the wireless communication system of claim 60, wherein the base station further comprises a receiver, the receiver configured to receive the decoded position information from the GPS enabled device (see Kingdon, col. 4,lines 26-53).

Regarding claim 63, Kingdon as modified by Dooley and Boesch discloses the wireless communication system of claim 62, wherein the base station is further

configured to determine a position of the GPS enabled device based on the decoded position information, and to transmit the determined position (i.e., reads on GPS satellite information modified to reflect the position of the mobile) to the GPS enabled device (see Dooley, col. 4,lines 38-50).

At the time of the invention it would have been obvious to one of ordinary skill in the art to further modify Kingdon to include a base station having a full GPS system or position determination entity for the purpose of allowing for a more timely acquisition of GPS signals.

Regarding claim 64, Kingdon as modified by Dooley and Boesch discloses the wireless communication system of claim 62, further comprising a position determination entity (reads on MLC), wherein the base station further comprises a network interface (i.e., reads on BSC and MSC/VLR) configured to interface the base station with the position determination entity (MLC), the base station configured to:

send the decoded position information to the position determination entity (i.e., MLC) through the network interface (MSC/VLR and BSC) (reads on MS using the assistance GPS data to calculate its position and sending this information back to the MLC, i.e., via the MSC/VLR 230,BSC 220 and BTS 210, hence the decoded position information is sent by the BTS 210 (base station)) (see Kingdon, col. 5,lines 17-23);

receive a position of the GPS enabled device determined from the decoded positon information from the position determination entity (MLC) through the network interface (i.e., MLC forwards the location of the MS to the requesting LA 240 via the

network (BSC and MSC/VLR and base station (BTS)) (see Kingdon, col. 2, lines 60-64 and col. 5,lines 17-33); and

transmit the position to the GPS enabled device (i.e., MLC forwards the location of the MS to the requesting LA 240 via the network (BSC and MSC/VLR and base station (BTS)), which can be in the mobile itself, see col. 3,lines 63-64) (see Kingdon, col. 2, lines 60-64 and col. 5,lines 17-33 and see Fig. 1).

Regarding claim 65, Kingdon as modified by Dooley and Boesch discloses the wireless communication system of claim 51, further comprising a control channel, wherein the GPS enabled device is configured to receive the GPS satellite information from the base station over the control channel (see Kingdon, col. 4,lines 54-59).

14. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kingdom and Boesch , in view of Yamane and Riley.

Regarding claim 36, Kingdon and Boesch discloses the base station of claim 33, but fails to further disclose comprising a receiver configured to periodically receive registration requests from the GPS enabled device, wherein the base station is configured to transmit the GPS satellite information in response to the registration requests.

In a similar field of endeavor, Yamane discloses a GPS enabled device (reads on mobile terminal 20) that transmits a position registration request through the base stations (i.e., reads on base station configured to periodically receive registration requests) and updates the are numbers of the radio zones A to D stored in RAM. (p. 3 [0062] & see Figs. 1 & 2).

At the time of the invention it would have been obvious to one ordinary skill in the art to modify the combination to include receiving registration requests from the GPS enabled device for the purpose of allowing the mobile or GPS enabled device to notify areas that is roaming into new coverage areas, such that requisite identification information is known.

However, Yamane does not further disclose wherein the base station is configured to transmit the GPS satellite information in response to the registration requests.

Again, in a similar field of endeavor Riley discloses wherein the base station is configured to transmit the GPS satellite information during registration (reads on when a mobile station participates in a position location session, which is, as it travels from sector A to D, mobile begins to make a location fix or register, see Fig. 4) (p. 3-4 [0029] & [0036]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Kingdon to include transmitting the GPS satellite information in response to registration requests for the purpose of assisting in location updating which is usually a part of registration when a mobile moves from cell to cell or sector to sector.

15. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kingdon and Boesch , in view of Ramesh.

Regarding claim 42, Kingdon and Boesch discloses the base station of claim 41, but fails to explicitly discloses wherein the control channel is a PCS common control channel.

In a similar field of endeavor, Ramesh discloses wherein the control channel is a PCS common control channel (col. 6,lines 17-46).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include a base station operating in a PCS radio communication network thus capable of allowing a mobile unit to listen the broadcasted position information on a PCS common control channel.

16. Claims 44,55 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kingdon and Dooley and Boesch , in further view of Yamane and Riley.

Regarding claim 44, the combination of Kingdon and Dooley and Boesch discloses the GPS enabled device of claim 43, but fails to explicitly disclose comprising a transmitter, wherein the GPS enabled device is configured to transmit a registration request to the base station using the transmitter, and wherein the GPS satellite information is received during the registrations.

In a similar field of endeavor, Yamane discloses a transmitter, wherein the GPS enabled device (mobile terminal 20, specifically CPU 21 within, see Fig. 2) is configured to transmit a registration request to the base station (reads on through base stations) using the transmitter (p. 3 [0062]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include mobile terminal able to generate a registration request to the base station for the purpose of allowing registration at the appropriate times, i.e., when the mobile terminal has moved from one region to the next.

Yamane fails to explicitly disclose wherein the GPS satellite information is received (i.e., from the base station) during the registration.

In a similar field of endeavor, Riley discloses wherein the GPS satellite information is received (i.e., from the base station) during the registration (p. 3 [0029]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to have modified the combination to include transmitting the GPS satellite information in response to registration requests for the purpose of assisting in location updating which is usually a part of registration when a mobile moves from cell to cell or sector to sector.

Regarding claims 55 and 57, the combination of Kingdon and Dooley and Boesch discloses the wireless communication system of claim 51,respectively, but fails to explicitly disclose wherein the base station further comprises a receiver configured to periodically receive registration requests from the GPS enabled device, and wherein the base station is configured to transmit the GPS satellite information in response to the registration request (and periodic registrations).

In a similar field of endeavor, Yamane discloses wherein the base station further comprises a receiver configured to periodically receive registration requests from the GPS enabled device (i.e., reads on base station receiving position registration requests from mobile terminal 20 as it travels through radio zones A-D) (p. 3 [0062]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include mobile terminal able to periodically generate

a registration request to the base station for the purpose of allowing registration at the appropriate times, i.e., when the mobile terminal has moved from one region to the next.

Yamane fails to explicitly disclose wherein the base station is configured to transmit the GPS satellite information in response to the registration request .

In a similar field of endeavor, Riley discloses wherein the GPS satellite information is received (i.e., from the base station) during the registration (p. 3 [0029]).

At the time of the invention it would have been obvious to one of ordinary skill in the art to have modified the combination to include transmitting the GPS satellite information in response to periodic registration requests for the purpose of assisting in location updating which is usually a part of registration when a mobile moves from cell to cell or sector to sector.

17. Claims 50 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kingdon and Dooley and Boesch, in further view of Ramesh.

Regarding claims 50 and 66, the combination of Kingdon and Dooley disclose the GPS enabled device of claims 49 and 65, respectively, but fails to disclose wherein the control channel is a PCS common control channel.

In a similar field of endeavor, Ramesh discloses wherein the control channel is a PCS common control channel (col. 6,lines 17-46).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include a base station operating in a PCS radio communication network thus capable of allowing a mobile unit to listen the broadcasted position information on a PCS common control channel.

18. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over the comibination of Kingdon and Dooley and Boesch, in further view of King, U.S. Patent No. 6,300,899.

Regarding claim 56, Kingdon as modified by Dooley and Boesch discloses the wireless communication system of claim 51, but fails to explicitly disclose wherein the transmitted information includes at least access assist information.

In a similar field of endeavor, King discloses that a GPS central reference site transmits via a wireless link acquisition (reads on access) assist information (col. 11,lines 11-14).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the combination to include access assist information for the purpose of assisting in the tracking of a particular satellite due to insufficient signal strength (see King, col. 11,lines 4-14).

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joy K. Contee whose telephone number is 571.272.7906. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571.272.7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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JC